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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,131	01/31/2001	Michel Marcel Jose Decre	PHNL000078	5393
24737	7590	07/22/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			MARKHAM, WESLEY D	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			1762	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/773,131	DECRE, MICHEL MARCEL JOSE
	<b>Examiner</b>	<b>Art Unit</b>
	Wesley D. Markham	1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 31 May 2005.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-8 and 15-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-8 and 15-19 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 31 January 2001 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

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**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application on 5/31/2005 (certificate of mailing dated 5/26/2005) after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/8/2005 has been entered.

***Response to Amendment***

2. Acknowledgement is made of the applicant's amendment filed on 3/8/2005, in which Claims 18 and 19 were amended. **Claims 1 – 8 and 15 – 19** remain pending in U.S. Application Serial No. 09/773,131, and an Office action on the merits follows.

***Drawings***

3. The formal drawings (2 sheets) filed by the applicant on 1/31/2001 are acknowledged and approved by the examiner.

***Claim Observations***

4. The phrase, "wherein the substantial solidification being sufficient so that..." in Claims 15 and 16 appears to contain a typographical / grammatical error and should read, "wherein the substantial solidification is sufficient so that..."

5. The phrase, "wherein a number parts for the at least two parts..." in Claim 18 appears to contain a typographical error and should read, "wherein a number of parts for the at least two parts..."

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. The rejection of Claims 18 and 19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, set forth in paragraph 5 of the previous Office action (i.e., the final Office action mailed on 1/27/2005), is withdrawn in light of the applicant's amendment to clarify the scope the claims. Specifically, it is now clear to one skilled in the art that Claim 18 requires the number of parts (at least two) used to form the polygonal shape be equal to half of the number of sides of the polygonal shape, and Claim 19 requires that each of the parts be congruent.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
10. Specifically, amended **Claim 18** (from which **Claim 19** depends) requires that the number of parts (at least two) used to form the polygonal shape be equal to half of the number of sides of the polygonal shape. After reviewing the originally filed specification, the examiner finds no support, either explicit, implicit, or inherent, for the aforementioned limitation. The applicant shows a singular example (see Figure 2C) in which the number of parts used to form the shape (i.e., 3 parts) is equal to half of the total number of sides of the polygon (i.e., 6 sides). However, the disclosure of a single example (i.e., a single species) does not provide support for the broad, potentially infinite, genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as required by Claims 18 and 19. Please note that the written description requirement for a claimed genus may be satisfied by sufficient description of a "representative number of species", which means that the species that are adequately described must be representative of the entire genus. Satisfactory disclosure of a "representative number" depends on whether one of skill in the art would recognize that the applicant was in possession of the necessary common attributes or features of the elements possessed by the members of the genus in view of the species disclosed (MPEP 2163(II)). In this

case, a single figure which happens to show a six-sided polygonal extension body having three parts is not a "representative number" of species sufficient to convey to one skilled in the art that the applicant originally had possession of the broad genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as required by Claims 18 and 19.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1 – 8 and 15 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (USPN 6,349,086) in view of Konishi et al. (USPN 6,012,858).

13. Regarding independent **Claim 1**, Nishida et al. teaches a method of manufacturing a circular optical storage disc (Col.4, lines 35 – Col.5, line 67; Col.7, lines 3 – 8), the method comprising providing a substrate "2" with a first surface and a periphery, providing a coating on the first surface by applying a liquid resin, rotating the substrate, and UV curing the liquid resin (i.e., solidifying the liquid), and wherein: when applying the liquid onto the first surface, the substrate is present in a separate extension body (i.e., ring "20"), the extension body having substantially circumferential contact with the periphery of the substrate and a surface substantially

flush with the first surface of the substrate, and after UV curing of the liquid resin (i.e., "substantial solidification"), the extension body and the substrate are separated (Figures 12 – 15; Col.11, line 25 – Col.12, line 6). Nishida et al. does not explicitly teach that the extension body comprises at least two parts. However, Konishi et al. teaches an extension body / liquid receiving base comprising at least two parts "32a" and "32b" in contact with the outer peripheral edge of the substrate "W" so that the spin-coating solution may not flow down from between the pair of bases and the substrate (Figure 17, Col.9, lines 51 – 58). It would have been obvious to one of ordinary skill in the art to have used a two-part ring / extension body fitted around the substrate in the method of Nishida et al., upon seeing the apparatus of Konishi et al., with the reasonable expectation of having an easier means for removal of the substrate and the extension body from each other after the spin-coating / curing process (i.e., because the two-part extension body can be separated from the substrate in sections / pieces as opposed to the extension body of Nishida et al., which must be removed as a single piece from the entire periphery of the substrate). The combination of Nishida et al. and Konishi et al. also teaches that the outer periphery of the extension body is circular (**Claim 2**) (Col.11, lines 25 – 30 of Nishida et al.); the outer periphery of the extension body is a regular polygon (**Claims 3 and 4**) (Figure 17 of Konishi et al.); the two parts of the extension body have surfaces substantially flush with the first surface of the substrate (**Claim 7**) (Figures 12 – 14 of Nishida et al.); the liquid is solidified by exposure to UV light (**Claim 8**) (Col.11, lines 31 – 44 of Nishida et al.); the curing is sufficient so that the coating breaks off at the

periphery of the substrate (**Claim 15**) (Figure 15, Col.11, lines 39 – 47 of Nishida et al.); the curing is sufficient so that the separation releases the coating from the extension body (**Claim 16**) (Col.11, lines 39 – 47 of Nishida et al.); the two parts / each of the parts of the extension body are congruent (**Claims 17 and 19**) (Figure 17 of Konishi et al.); and a number of parts used to form the polygonal shape (2 parts) is equal to half the number of sides of the polygonal shape (i.e., a square or rectangle, which has 4 sides) (**Claim 18**) (Figure 17 of Konishi et al.). Regarding **Claim 5**, Nishida et al. does not explicitly teach that the surface of the extension body consists of substantially the same material as the substrate of the optical storage disc. Specifically, Nishida et al. is silent regarding the material used to make ring “20”. However, in a similar embodiment, Nishida et al. does teach that an optical disc having a slightly larger outer diameter than the outer diameter of the usual substrate can be used so that the excess portion (outer rim) of the substrate can be cut-off in order to eliminate the hump of UV cured coating material on the outer rim (Col.11, line 53 – Col.12, line 6; Figure 16). This teaching clearly suggests to one of ordinary skill in the art that the same material can effectively be used for the optical disc substrate and the means to collect the undesired hump of coating material. It would have been obvious to one of ordinary skill in the art to use a material for the ring “20” that is the same as that of the substrate so that the coating material would desirably flow over the substrate and the ring in the same manner, thereby forming a uniform coating over both surfaces. If this was not the case, and the surface of the ring was made of a different material with different coating material spreading

characteristics, the coating material would be expected to either bead-up at the edge of the substrate or flow onto and over the edge of the extension body too quickly, thereby forming a non-uniform coating and negating the purpose of the extension body. Regarding **Claim 6**, Nishida et al. does not explicitly teach that the material of the ring / extension body consists of a material to which the coating adheres relatively poorly. Specifically, Nishida et al. is silent regarding the material used to make the extension body. However, Nishida et al. does teach that the UV cured resin (i.e., the coating) is removed from the extension body "20" (Col.11, lines 39 – 47). Therefore, it would have been obvious to one of ordinary skill in the art to use an extension body made of a material to which the coating of Nishida et al. adheres poorly so that the extension body can be easily cleaned (i.e., the UV cured resin on the extension body can be easily removed), thereby facilitating its use in subsequent optical disc coating processes.

14. Claims 3, 4, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (USPN 6,349,086) in view of Konishi et al. (USPN 6,012,858), in further view of Boeckl (USPN 4,068,019).

15. Alternatively to the reasoning presented above in paragraph 13, the combination of Nishida et al. and Konishi et al. teaches all the limitations of **Claims 3, 4, 18, and 19**, except for a method wherein the extension body has an outer periphery which has a (regular) polygonal shape. However, the overall purpose of the extension body of Nishida et al. is to collect the undesired hump of UV curable/cured resin that would

otherwise form on the outer rim of the spin-coated optical disc, thereby producing an optical disc with optimum surface properties (i.e., free of surface irregularities) (Col.11, lines 44 – 51). Boeckl teaches that, in a similar spin coating process in which an auxiliary surface is used to avoid edge bead buildup, the substrate and the frame (i.e., the auxiliary surface) may be any shape (e.g., circular, rectangular, square) – the only requirement is that a snug fit be provided between the substrate and the frame (i.e., there is no gap between the substrate and the frame) so that the coating material does not build-up on the edge of the substrate (Col.5, lines 28 – 67). Therefore, it would have been obvious to one of ordinary skill in the art to utilize an extension body having an outer periphery of any shape (including a regular polygon such as a square) in the process of the combination of Nishida et al. and Konishi et al. with the reasonable expectation of success and obtaining similar results (i.e., collecting the undesired hump of UV curable/cured resin that would otherwise form on the outer rim of the spin-coated optical disc, thereby producing an optical disc with optimum surface properties, regardless of the shape of the outer periphery of the extension body). One of ordinary skill in the art would have expected to obtain similar results, regardless of the shape of the outer periphery of the extension body, so long as the inner periphery of the extension body fits snugly against the outer periphery of the substrate as taught by Boeckl.

***Response to Arguments***

16. Applicant's arguments filed on 3/8/2005 have been fully considered but they are not persuasive.

17. Regarding the 35 U.S.C. 112, first paragraph, rejection, the applicant argues that one is allowed to phrase his claims broadly to cover other embodiments, unless the examiner can find art that would render such claims invalid. In response, this argument is not convincing. The test under 35 U.S.C. 112, first paragraph, is whether the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. After reviewing the originally filed specification, the examiner finds no support, either explicit, implicit, or inherent, for the limitations required by Claims 18 and 19. The applicant shows a singular example (see Figure 2C) in which the number of parts used to form the shape (i.e., 3 parts) is equal to half of the total number of sides of the polygon (i.e., 6 sides). However, the disclosure of a single example (i.e., a single species) does not provide support for the broad, potentially infinite, genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as the applicant proposes to claim. Please note that the written description requirement for a claimed genus may be satisfied by sufficient description of a "representative number of species", which means that the species that are adequately described must be representative of the entire genus. Satisfactory disclosure of a "representative number" depends on whether one of skill

in the art would recognize that the applicant was in possession of the necessary common attributes or features of the elements possessed by the members of the genus in view of the species disclosed (MPEP 2163(II)). In this case, a single figure which happens to show a six-sided polygonal extension body having three parts, in the absence of any supporting description regarding the relationship between the number of parts and sides of the polygonal extension body, is not a "representative number" of species sufficient to convey to one skilled in the art that the applicant had possession of the broad genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as now required by Claims 18 and 19.

18. Regarding the art rejections, the applicant argues that Nishida relates to optical media while Konishi relates to semiconductor manufacturing, and one of ordinary skill in the art would not look to the semiconductor arts to solve problems associated with manufacturing optical disks. In response, both Nishida and Konishi are drawn to spin coating a substrate with an apparatus and in a manner sufficient to insure that a uniform coating / film is formed on the surface of the substrate. One of ordinary skill in the art would have reasonably expected the problems and solutions associated with obtaining a uniform coating / film on the surface of a substrate by spin coating to be similar, regardless of whether the substrate being spin coated is a semiconductor wafer or an optical disk. In such a situation, one of ordinary skill in the art would have been motivated to look to the spin coating art in general to solve the problems

associated therewith; as such, the combination of the Nishida and Konishi references is proper.

19. The applicant also argues that the liquid used in Konishi is a developing solution (not a coating solution), and there is no teaching or suggestion that the parts 32a and 32b of Konishi could be used for the purposes to which the applicant's extension body is put. In response, the process liquid of Konishi is not limited to a developing solution – Konishi explicitly teaches that the process liquid can be a resist solution (Col.9, lines 64 – 67), which is a liquid used to coat the substrate (Col.1, lines 9 – 10). Further, one of ordinary skill in the art would have had a reasonable expectation of success in utilizing a multi-part extension body (as taught by Konishi and claimed by the applicant) as opposed to a single part extension body (as taught by Nishida) in the process of Nishida because both types of extension bodies are removable and would be reasonably expected to achieve similar results (i.e., collecting undesired coating material that is spun-off the edge of the substrate so that, when the body is removed, a uniform layer remains on the substrate); regardless of whether the body comprises a single piece or multiple pieces.
20. To conclude, the applicant cites the last paragraph on page 8 of the specification to show "unexpected results" due to the shape of the extension body. In response, this argument is not convincing. First, the results shown by the applicant only compare a circular extension body to a square extension body and thus are not commensurate in scope with the applicant's claims, which are generally drawn to a polygonal body. Additionally, the fact that the square extension body (Figure 2B) functions more

effectively than the circular extension body (Figure 2A) is not unexpected because the overall area of the square extension body is much greater, thereby providing more area for the undesired coating material (i.e., the "hump") to collect. This result would be expected by one of ordinary skill in the art, not unexpected.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kelly et al. (USPN 5,294,257) teaches a spin coating method in which a conformable elastomer seal encircles the periphery of the substrate being coated so that excess coating material collects on the elastomer seal, thereby eliminating edge beading on the substrate. Tanimoto (USPN 5,250,116) teaches a similar spin coating method in which a metal support plate flush with the surface of the substrate is used to eliminate edge beading on the substrate. Takase et al. (JP 11-086356 A) teaches removing the peripheral build-up of a UV-cured resin coating material on the outside diameter of a spin-coated optical disk by cutting-off the outer periphery of the disk.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D. Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wesley D Markham  
Examiner  
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WDM

TIMOTHY MEEKS  
SUPERVISORY PATENT EXAMINER